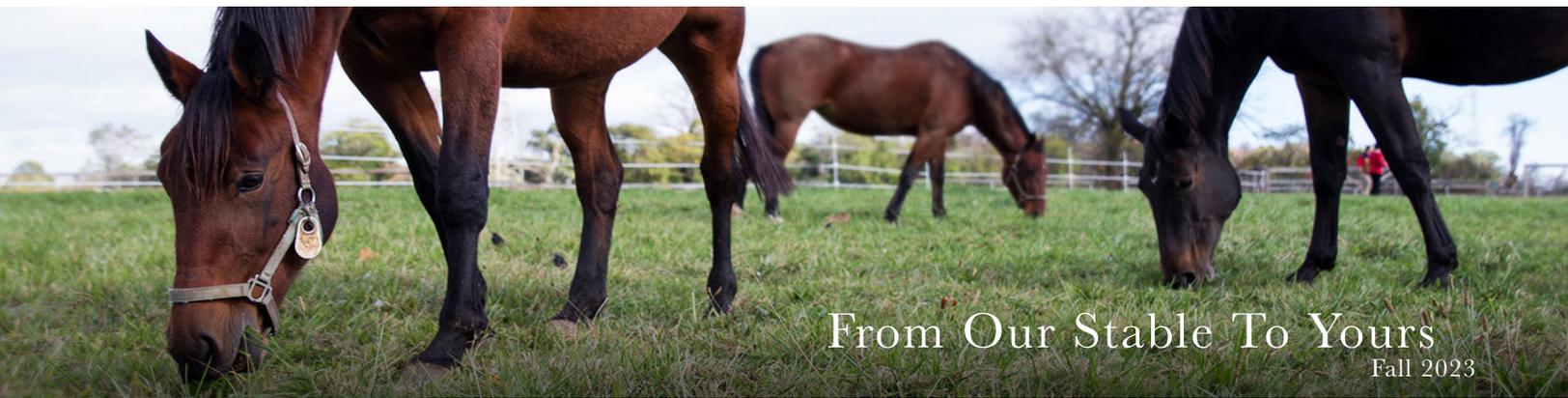


RUTGERS UNIVERSITY

EQUINE SCIENCE QUARTERLY



From Our Stable To Yours
Fall 2023

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Continuing
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Seminar



Rutgers University Homecoming & Family Weekend: An Afternoon At Rutgers Farms & Gardens

The Rutgers University Equine Science Center participated in the first-ever “Rutgers Homecoming & Family Weekend” on Friday, October 13, where guests were treated to entertaining programs, sporting events, a football game

tailgate, and more.

As a special addition to the normally scheduled programming, this year some of the Rutgers farms and gardens, along with the Equine Science Center, started the first ever “An Afternoon At Rutgers Farms &

From The Clubhouse



We can't wait to see you
at the 2023 Evening of
Science & Celebration
on November 9, 2023!

Dear Friends,

We are in full swing of the 2023 fall academic year and have been busy refreshing the research horses on the high-speed treadmill in preparation for several research projects coming up through 2024. All eight horses truly like their job and look forward to the exercise. I also have been busy trying to finalize the 2023 Horse Racing Economic Impact Report being produced by Econsult Solutions Inc. at the request of the legislature as it debates whether to provide additional funding for racing purses for the next upcoming five-year period.

On June 30, I traveled to the Horse Park of New Jersey to celebrate the retirement of one of my favorite people, Dr. Daniel P. Keenan. There was a lovely crowd of family and friends who paid tribute to one of the most compassionate and capable equine practitioners in the country. We were so lucky to have him here in New Jersey and our horses were better off because of his care. Dr. Keenan was a staunch supporter of the Equine Science Center and his practice, Foundation Equine was the first participant in the Vet Memorial Program which memorializes horses that have been euthanized with a donation to the Center. Dan, enjoy your retirement with family, friends, and things that you love to do!

On July 2, I ventured to Goshen, New York to attend the board meeting and annual dinner of the Harness Racing Museum and Hall of Fame. I am pleased to serve on the board which consists of many of the leading names in harness racing. Hall of Famer John Campbell is chairing the 100th anniversary of the Hambletonian committee which will take place during 2025. We will be showcasing the best of harness racing in New Jersey and a stop on one of the tours will be the Equine Exercise Physiology Lab.

The Center also tabled at the Hambletonian Veterinary Continuing Education Seminar on August 3-4. The Seminar

featured two of our Center members as speakers. Dr. Carey Williams presented "Horse Supplements and the Science Behind Them (Or Not!)" to a large, enthusiastic crowd and Dr. Alisa Herbst presented "Evaluate Muscle Atrophy in Horses Using a Novel Muscle Atrophy Scoring System (MASS)." Both of my colleagues received rave reviews in their respective evaluations and were praised for bringing practical information to the discussions that veterinarians can use in their daily practice. To learn more about the event and presentations, take a look at the "From The Lab section on [Page 10](#), and a story about the event on [Page 16](#).

On September 8 the Endocrinology and Animal Biosciences Graduate Student Organization hosted a welcome to the fall semester picnic at the Roundhouse. It's always great to visit with returning and new graduate students and to learn about their research. Fun was had by faculty, students, and staff even though it was one of those 95-degree days, and the Roundhouse is not air conditioned!

On September 14, Kyle Hartmann and I tabled at the Somerset County Influencing Agriculture hosted by Duke Farms. The focus of the discussion was keeping young farmers viable and sustainable. Our own Rutgers Cooperative Extension Director, Brian Schilling moderated one of the panels and a healthy exchange of challenges young farmers face and proposed solutions ensued throughout the morning. Duke Farms provided a lovely farm to table lunch buffet which featured dishes using food grown and raised in Somerset County. See the fantastic story that Somerset County wrote [Page 12](#).

On October 5 I had the privilege of giving a tour of the Equine Exercise Physiology Lab and lecture about the NJ equine industry to Professor Joan Bennet's senior capstone class "Women in Science". Some of the students are very interested in our research and the Center's many activities and are planning on joining our team for credit in the coming semesters.

At the annual Evening of Science and Celebration I hope you will say "hi" to our new Ph.D. student Bryce Bitsie. Bryce joined us on September 1 and comes to us From New Mexico where he was an Agricultural Agent for Cooperative Extension. Mr. Bitsie is leading a new journal club which meets on Monday afternoons. Welcome Bryce!

And speaking of the Evening of Science and Celebration, I am looking forward to seeing many of you on Thursday, November 9 from 6:00-9:00 PM. The evening begins with a luscious dinner followed by our keynote speaker, Dr. Jessica Leatherwood from Tarleton State University in Texas who will present "Welfare over Triumphs: Protecting the Juvenile Performance Horse". We also will present the "Spirit of the Horse" award to Taylor Palmer, Jr. from Boxwood Farm and the Gold Medal Horse Farm award to Trinity Dressage in Cream Ridge. See you there!

Best,
Karyn

PARTNERS



New Jersey Farm Bureau's primary purpose is to represent the overall interests and improve the financial well-being of farmers and our \$800 million industry. NJFB activities are supported through voluntary membership and annual dues. Members have access to:

- Staff assistance on farming issues and regulatory problems.
- Educational workshops on topical issues such as farm labor, wildlife damage, and zoning.
- Weekly updates on legislation news and regulations affecting all aspects of farming.

It pays to be a NJ Farm Bureau member! For a full list of membership levels and benefits, or to sign up, visit: www.njfb.org.



UMH Properties, Inc., is a real estate investment trust that owns and operates manufactured home communities in seven states throughout the northeast.

UMH has been in business since 1968, operating as a public company since 1985. Owning a portfolio of over 90 manufactured home communities, housing approximately 15,700 home sites.

In addition, owning over 810 acres of land for the development of new sites. It is our mission as a company to provide the best quality affordable home for the hard working residents of Pennsylvania.

UMH communities are perfect for residents of all ages, let us help up you find your dream home today.

For more information about UMH Properties, Inc., please visit: www.umh.com



The New Jersey Department of Agriculture (NJDA) is an agency which oversees programs that serve virtually all New Jersey citizens. One of the Department's major priorities is to promote, protect and serve the Garden State's diverse agriculture and agribusiness industries.

In addition to the programs we offer to support production agriculture, NJDA also manages programs that feed schoolchildren, distribute surplus federal foods to soup kitchens and pantries that serve our needy citizens, conserve precious soil and water resources, protect farmland from development and preserve it for future agricultural use, expand export markets for fresh and processed agricultural products, and promote our commercial fishing industry, and administer the complete program of agriculture, food and natural resource education, which includes the State FFA Association.

For more information about NJDA, please visit: www.nj.gov/agriculture



Boehringer Ingelheim Animal Health is the second largest animal health business in the world, with presence in more than 150 countries, and a significant presence in the United States, with more than 3,100 employees in places that include Georgia, Missouri, Iowa, Minnesota, New Jersey and Puerto Rico.

The lives of animals and humans are interconnected in deep and complex ways. We know that when animals are healthy, humans are healthier too. Across the globe, our 9,700 employees are dedicated to delivering value through innovation, thus enhancing the well-being of both. Respect for animals, humans and the environment guides us every day. We develop solutions and provide services to protect animals from disease and pain. We support our customers in taking care of the health of their animals and protect our communities against life- and society-threatening diseases.

For more information about Boehringer Ingelheim Animal Health, please visit: www.boehringer-ingelheim.us

UPCOMING 2023 - 2024 EVENTS

Evening of Science & Celebration

Thursday, November 9, 2023

Cook Student Center
Rutgers, The State University of NJ
New Brunswick, NJ

go.rutgers.edu/Evening2023

Horse Management Seminar Live!

Saturday, February 3, 2023

Cook Student Center
Rutgers, The State University of NJ
New Brunswick, NJ

go.rutgers.edu/2024HMSLiveReg

Horse Management Seminar: Webinar Series

Tuesday, February 13, 20, 27, 2024

Topics Include:
Pasture Management on Feb. 13th
Senior Horse Care on Feb. 20th
Horse Health and Welfare on Feb. 27th

go.rutgers.edu/2024VirtualHMSReg

Junior Animal Science Symposium

Saturday, March 23, 2024

Cook Student Center
Rutgers, The State University of NJ
New Brunswick, NJ

amelia.valente@njaes.rutgers.edu

For more events, visit our website @ esc.rutgers.edu

Rutgers University Homecoming & Family Weekend:

An Afternoon At Rutgers Farms & Gardens



Continued from Pg. 1



Undergraduate student Sarah Paladino “holds” Randy on the treadmill during the High-Speed Treadmill Demo. This positions the horse at the safest spot on the treadmill, as well as also positioning the horse in the ideal spot for taking measurements during the frequest research that is conducted in the Equine Exercise Physiology Laboratory.

Gardens;” a daylong choose your own adventure series of tours and demonstrations highlighting some of the fantastic programs at the New Jersey Agricultural Experiment Station, and the School of Environmental & Biological Sciences.

Tours included the Cook Animal Farm, Equine Science Center’s Equine Exercise Physiology Laboratory, Rutgers Gardens, and Floriculture Greenhouses.

The Cook Animal Farm included visits to the cows, sheep, goats, and pigs, highlighting

the new piglets.

The Equine Exercise Physiology Lab tour included a history of the equine industry in New Jersey, focusing on things like open space, as well as emphasizing how the industry acts as an economic powerhouse providing numerous jobs and substantial monies to the people of New Jersey.

The tour also included a High-Speed Treadmill Demo, always a crowd favorite, showcasing how the horse is used as a model for



The Rutgers Equine Science Center staff, faculty, and students, pose with Randy, one of the research mares used during the “High-Speed Treadmill Demo.”

human exercise research.

The Rutgers Gardens tour, led by Dr. Lauren Errickson, gave guests a glimpse into the nearly 180 acres that is the official botanical garden of Rutgers University.

When visiting Rutgers Gardens guests can explore areas such as the Bamboo Grove, Ella Quimby Water Conservation Terrace Garde, Pollinator Garden, Rhododendron and Azalea Garden, and Succulent Garden (to just highlight a few of the many “Gardens & Natural Areas” that make up Rutgers Gardens).

Throughout the day Cook’s Market, the weekly farmers market at Rutgers Gardens, sold food; specialty items such as coffee beans, honey, soap, spices; and plants; and included the now popular “Pawty” of canines, which is highlighted each week in the Cook’s Market e-blast announcing the vendors for the week.

Each e-blast now includes a special section where pictures of the previous week’s doggos can be viewed, so be sure to subscribe to thier e-blast to see what’s happening at Cook’s Market each week (and

to “meet” some of the dogs!).

The Floriculture Greenhouses tour was also a popular destination, highlighting the Poinsettia breeding operation that has become a beloved program in the Department of Plant Biology.

Each year the Floriculture Greenhouses features its Poinsettia Sale right before the winter holidays, offering a colorfully wide array of poinsettias to brighten up homes and act as centerpieces for holiday events.

Guests were able to get a sneak peek of this year’s assortment and learn about how the Floriculture Greenhouses prepare for the holiday rush.

The Cook Farm Store was also open throughout the day, selling meats, eggs, soaps, wool dryer balls, and tallow balm (all products produced at the farm); as well as providing a space for student groups to sell things like magnets, apparel, and promotional items to raise money for their clubs.

Overall an eventful day, the Equine Science Center is already looking forward to participating next year and building upon this year’s success.



To Learn Moare About These Programs Please Visit:

Cook Animal Farm

<https://farmtours.rutgers.edu>

Equine Science Center

<https://esc.rutgers.edu>

Rutgers Gardens

<https://rutgersgardens.rutgers.edu>

Cook Farm Store

<https://njaes.rutgers.edu/animal-care/farm-sales>

Floriculture Greenhouse

<https://plantbiology.rutgers.edu/floriculture-greenhouse.html>

Cook's Market

<https://rutgersgardens.rutgers.edu/cooks-market>

THE EQUINE SCIENCE CENTER PRESENTS

An Evening of Science & Celebration

Thursday, November 9th, 2023

6:00pm to 9:00pm

Cook Student Center, 59 Biel Road,
New Brunswick, NJ 08901



Keynote By

Dr. Jessica Leatherwood

From Tarleton State University

"Welfare over Triumphs: Protecting the Juvenile Performance Horse"

Presentations

Welcome & Equine Science Center Update

Keynote Address

Research Updates

Awards

The Gold Medal Horse Farm Award

The Spirit of the Horse Award

 facebook.com/RutgersEquineScienceCenter  youtube.com/c/RutgersEquineScienceCenter  instagram.com/ruequinescience  pinterest.com/RutgersESC



RUTGERS

New Jersey Agricultural
Experiment Station

Event Registration Closes: THURSDAY, NOVEMBER 2ND, 2022

To register, please go on-line to: <https://go.rutgers.edu/Evening2023>

Event fee: \$35 for adults & \$15 for full-time students

Please remit payment & mail to: Rutgers Equine Science Center

57 US Highway 1, New Brunswick, NJ 08901-8554



Dr. Alisha Herbst showcases one of the steps in the Muscle Atrophy Scoring System (MASS).

Lab Notes - Dr. Herbst

From The Lab:

"Evaluate Muscle Atrophy in Horses Using a Novel Muscle Atrophy Scoring System (MASS)": A summary of the 2023 Hambletonian Continuing Education Talk



THE TOP 5
TAKE-A-WAYS

#1

There are many methods to measure muscle mass in horses, but the most clinically relevant are the scoring-based techniques and the ultrasound-based techniques, with the latter being relevant for experienced veterinarians

#2

There are many causes of muscle loss, aka muscle atrophy, in horses which include normal age-related processes, detraining, malnutrition, and various medical conditions.

Dr. Herbst started off the seminar series at the Hambletonian Continuing Education Seminar on August 4, 2023 with her talk entitled: “Evaluate muscle atrophy in horses using a novel muscle atrophy scoring system (MASS)”.

“There are various reasons for loss of muscle mass, also known as muscle atrophy”, Dr. Herbst explained. “For example, horses can develop muscle atrophy due to injuries or malnutrition, but also as a result of medical conditions such as Cushing disease, or equine protozoal myeloencephalitis”.

She further explained that horses, like humans, also develop muscle atrophy in the absence of medical conditions as part of the natural aging process.

Regarding older horses (≥ 15 years) with low muscle mass specifically, she shared results from a nation-wide survey-based study that her team recently published (<https://doi.org/10.1111/evj.13958>).

The study showed that 17.2% of senior horses were affected by low muscle mass, and that advancing age was an important risk factor for low muscle mass, along with horse sex (geldings were at higher risk than mares), horse retirement,

and the presence of osteoarthritis, laminitis, and Cushing disease.

“Irrespective of age, muscle atrophy can adversely affect welfare and the ability to work in horses”, she stated. “Therefore, it is important to monitor them closely for signs of muscle atrophy, and to treat them early on to achieve the best possible treatment success,” she said.

Dr. Herbst shared a long list of methods that are available to monitor muscle mass in horses, but highlighted that the scoring-based techniques, which include the Muscle Atrophy Scoring System (MASS; <https://doi.org/10.1016/j.jevs.2021.103771>) are among the cheapest and user-friendliest.

She introduced the audience to the MASS through explanatory videos, that will also become available on the Rutgers Equine Science Center and University of Kentucky websites soon.

Towards the end of her presentation, she shared an overview of the promising initial validation results for the system and elaborated on future studies planned to validate the system even further.

Her talk concluded with a brief MASS practice session using pictures, as well as a summary of the main take home messages.

#3

Muscle atrophy is associated with a reduced ability to work and welfare-related issues in horses, thus identifying and treating muscle atrophy early on is important.

#4

Once muscle atrophy has been detected, it is important to identify the underlying cause and to treat it. If treating the underlying condition does not result in sufficient muscle mass improvements, supplementary therapies such as carrot stretches, cavaletti poles, hill training, and diet evaluation/adjustment should be considered.

#5

The MASS is most useful when routinely applied by veterinarians during patient visits, and when routinely used by owners to score their horse and alert veterinarians to muscle atrophy.



The Generational Farmer panel at Somerset County’s Influencing Agriculture Conference included (l-r) Carol English of English Farm in Basking Ridge; Matt Puskas of Middlebush Farm in Franklin Township; and Jimmy Abma of Abma’s Farms in Hillsborough and Doug Van Nuys of Hillsboro Farm. - Picture provided by Somerset County.

Somerset County Agriculture Conference Highlights Economic Challenges Of Farming

Somerset County hosted Influencing Agriculture at Duke Farms in Hillsborough that gave local farmers an opportunity to describe the economic challenges of farming.

The conference also celebrated the County’s successful Farmland Preservation Program and was attended by owners of preserved local farms, as well as state, academic, and business leaders.

During the conference, Somerset County officials announced their biggest farmland preservation “pipeline” in the 40-year history

of farmland preservation, consisting of 2,432 potential acres across 35 farms.

Upon completion, these projects would increase the county’s preserved farm acreage from 9,000 today to more than 11,400 acres. Last year, the county announced a goal of preserving 16,000 acres of farmland.

“The fact that we’re holding this conference is a testament to our commitment to creating a more agriculture-friendly environment in Somerset County,” said Somerset County

Commissioner Paul M. Drake, liaison to the Somerset County Agriculture Development Board. “Preserved farms are an important part of our strategy for long term viability of farming, but our job is not done after farms are preserved. We need to make sure farming is economically sustainable, too.”

Thirteen farmers, featured in a new County video, participated in panel discussions sharing economic challenges they face and opportunities for the future of agriculture in Somerset County. Among the challenges that undermine their ability to make a full-time living from farming, the farmers’ cited crop damage from the overpopulation of deer, regulatory barriers, distribution challenges, healthcare costs, lack of access to capital, changing weather patterns due to climate change, and the need for public education around local food systems.

“Most people don’t have a concept about where their food comes from,” said Doug Van Nuys, owner of Hillsboro Farm. “They have no idea what it takes for us to produce, how hard it is, and all the factors that come into play with water quality, insect damage, deer damage... the weather constantly throwing us a curve ball... and the public will ask us why we don’t have a certain vegetable or fruit. Everything is a cycle and a season – and we have to work with it. We need to be an educator to our customers.”

“Farming is our history, farming is our culture; our farmers exemplify that heritage, that fine tradition,” said Somerset County Commissioner Melonie Marano, who moderated a panel focused on “Generational Farmers.”

Kate Katzer, Somerset County’s Principal Planner for Agriculture, in the Office of Planning,



Somerset County Administrator Colleen Mahr welcomes participants to the Influencing Agriculture conference: “We value our farms, but we also understand it is a hard, dirty business that you put your heart and soul into.”
- Picture provided by Somerset County.

Policy and Economic Development, announced that Somerset County currently has its largest pipeline ever for farmland preservation. She also named four specific farms that she anticipates will be preserved over the coming four months.

They include: Branchburg - Deerfield Creek Farm, 108 acres; Bedminster - Champey Farm, 83 acres; Bedminster - Segal & Morel Farm, 62 acres; and Hillsborough - Drenchko Farm, 24 acres.

Farmland preservation projects are funded through the State of New Jersey and the County Open Space fund. The County purchases easements on farms to keep the land permanently in agriculture. When farmers preserve their farm, they receive compensation for giving up the right to develop the property for any purpose other than agriculture.

Principal Planner Katzer also introduced several new initiatives to help farms thrive, including marketing assistance and wholesaling opportunities. To support marketing, Somerset County is offering help with website development, has developed educational materials for schools and community groups, and launched a series of storymaps to engage local consumers.

Regenerating Native

Locating Duke Farms within the Piedmont Region

Humans have been shaping the landscape of the Piedmont Region of the Southeastern United States since the beginning of human intervention, the region's natural landscape of deciduous forest. But industrial, agricultural, and urban development has dramatically altered the environment. Regeneration of the impacts of humans and restores native ecosystems and benefits humans by providing food, shelter, and clean air.

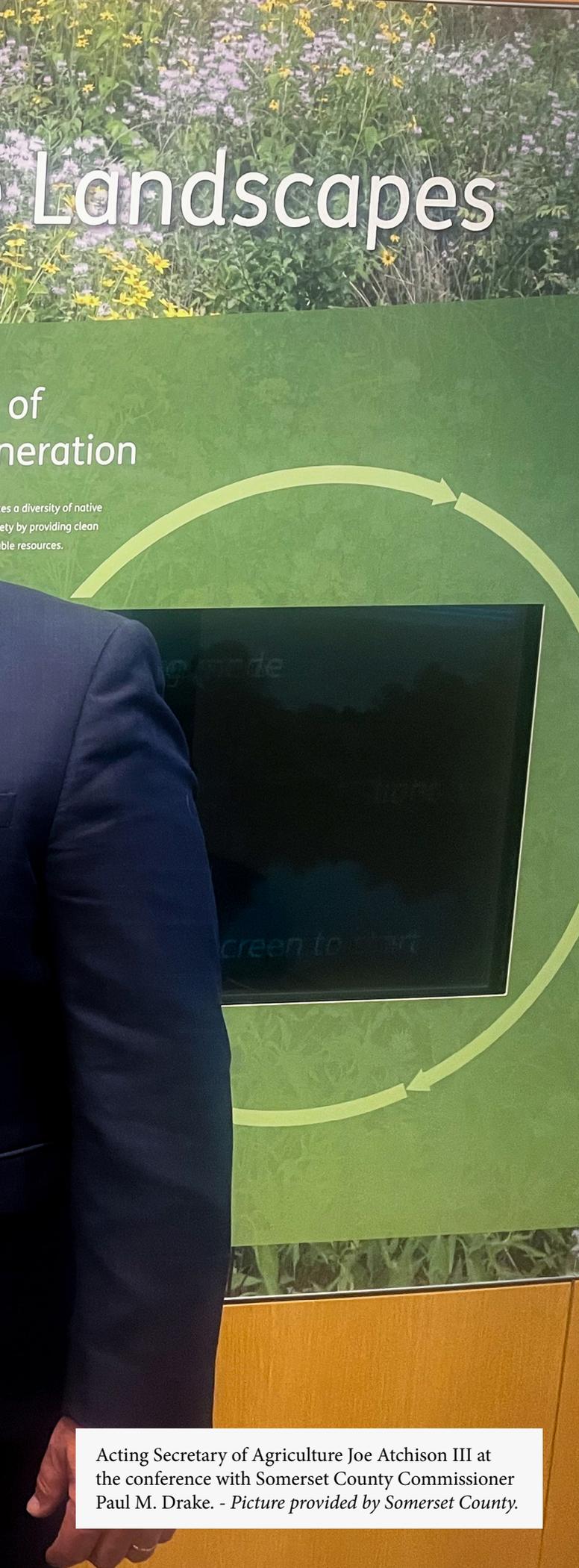
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Landscapes

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ble resources.

The county also has offered right-to-farm and technical support presentations for municipal staff and farmers and has given farmers access to the county's economic development and GIS resources.

The Influencing Agriculture conference coincided with the opening of many local farms to the public for harvest season festivals and markets. Somerset County websites list local farm markets and agritourism opportunities.

Commissioner Drake explained that Somerset County this summer pushed for "Central Jersey" to be added to the state tourism map to encourage agritourism. "People who come to visit our farms also spend money in our hotels, restaurants, retail shops, and service businesses of all kinds," he said. "By helping farmers succeed, we help the larger business community succeed."

Influencing Agriculture was the second convening this year of industry leadership organized by Somerset County's Economic Development Office, in Somerset County Office of Planning, Policy and Economic Development.

Special thanks to Influencing Agriculture's panelists: Hillsboro Farm, Abma's Farms, Middlebush Dairy Farm, English Farm, AquaSprout, Hidden Spring Lavender & Alpaca Farm, Martenette Farms, Morganics Family Farm, Norz Hill Farm; Panel moderators: Assembly Agriculture & Food Security Chair, Assemblyman Roy Freiman, Somerset County Commissioner Melonie Marano, and Rutgers University Cooperative Extension Director Brian Schilling; and host Duke Farms' Sustainable Agriculture Manager Lauren Salvatore, Duke Farms Executive Director Margaret Waldock; and Chef Lauren Owens, who utilized local ingredients for breakfast and lunch.

Editors Note: A special thanks to Somerset County who provided the text for this article via a news release on September 25, 2023.

Acting Secretary of Agriculture Joe Atchison III at the conference with Somerset County Commissioner Paul M. Drake. - Picture provided by Somerset County.



The 2023 Hambletonian Continuing Education Seminar

The Equine Science Center had some great representation at the annual “Hambletonian Continuing Education Seminar.”

Dr. Alisa Herbst presented “Evaluate Muscle Atrophy in Horses using a novel muscle atrophy scoring system.”

Her presentation focused on the importance of using a system like the Muscle Atrophy Scoring System (MASS) to assist in monitoring horse health, and discussed the potential for MASS to be used by horse owners and veterinarians to better track muscle loss or gain in horses.

Dr. Carey Williams presented “Horse Supplements and the Science behind them (or not)”. Always a popular topic, Dr. Williams gave a brief presentation, and then focused on questions from attendees.

Using a list that included slides for each topic, and the related supplement for that topic; she covered what has been shown to work, what might not be as effective, and what has no scientific basis for use.

Attendees were thrilled to attend and treated to their very own copy of the 2022 Cooperative Extension Bulletin, “*Does My Horse Need Supplements*,” by Dr. Williams.

The Equine Science Center also tabled at the event, showcasing what the Center does, answering questions of attendees, and showcasing the recently published “2023 New Jersey Equine Industry Summit – Summit Proceedings.”

For more information about the Muscle Atrophy Scoring System, please contact Dr. Herbst at esc@njaes.rutgers.edu.

The Equine Hindgut Microbiome

Jennifer Weinert-Nelson, USDA-ARS Post-Doc

Carey Williams, Extension Specialist in Equine Management

In recent years, the microbiome has become a topic of great interest in humans and across animal species, including horses. With the increasing emphasis on the role of the microbiome in equine health and nutrition, it is important to understand the basics about this rapidly evolving field of science.

What Is the Microbiome?

Microbiome is a term that refers to all the microorganisms present in a given habitat. While the term microbiome is most often used in reference to the gastrointestinal microbiota, this term can refer to the microbiota present in *any* habitat. For example, in nature, there are microbiomes associated with soils, surrounding the roots of plants or in bodies of water. In humans and animals, different parts of the body have distinct microbiomes. A few examples include the microbiomes associated with the skin, the eyes, the vagina of females, the mouth, and, of course, the gastrointestinal tract and the manure produced as waste from digestive processes. Furthermore, within the gastrointestinal tract, the microbiome differs between organs, with different microbial communities inhabiting the stomach, small intestine, and even between the various segments of the large intestine. In the field of equine nutrition, there is a heavy focus on the hindgut microbiome.

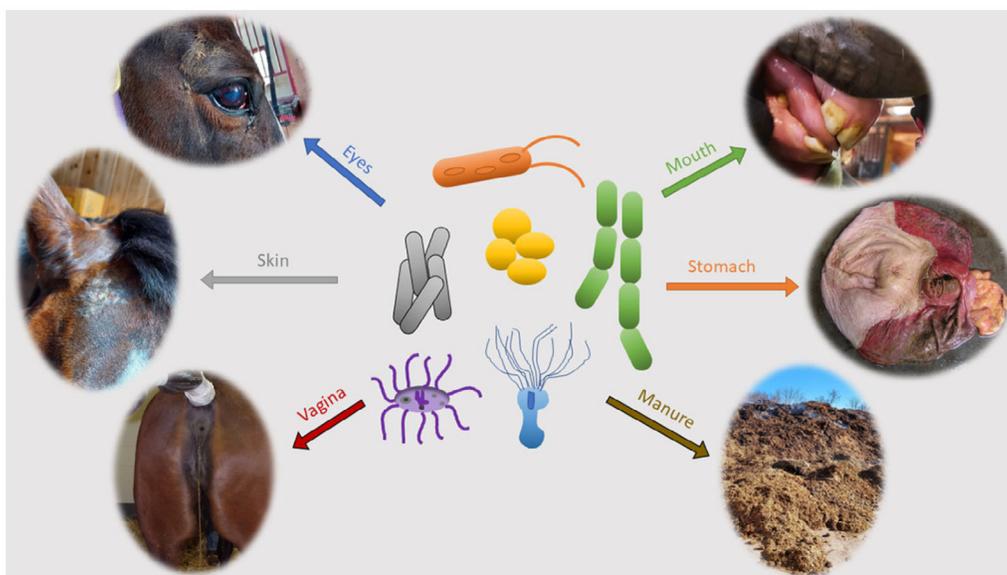


Figure 1. A microbiome can be found anywhere. In the horse, the eyes, skin, mouth, reproductive organs, digestive organs, and the manure output are just a few examples. Photo credit C. Williams.

Back by popular demand...

Rutgers VIRTUAL Horse Management Seminar



2024 - You asked for it!

Series of 3 evening
webinars,
join 1 or all 3!

Tuesdays @ 6:30 - 8:30 PM

**Feb. 13 -
Pasture
Management**

**Feb. 20 -
the Senior Horse**

**Feb. 27 -
Health and
Welfare**

The most popular topics were
chosen from previous webinar
evaluations!



**Specific Topics
Include:**

Pasture Care Equipment

Weed Control

Evaluating Pain

Parasites and Ticks

Senior Horse Nutrition

Geriatric Veterinary Care



For a full program and registration details:

<https://go.rutgers.edu/2024VirtualHMSReg>

Equine Science Center
Better Horsecare through
Research and Education



SAVE THE DATE

Saturday,

March 23, 2024

at Cook Campus Farm

Rutgers—New Brunswick

Hands-on workshops in topics:

Equine * Swine * Small Ruminant
(Sheep & Goat) * Large Ruminant (Cattle)
Poultry * Beekeeping * Rabbit * Cavy
(Guinea Pig) * Small Animals *

Animal Science Video Contest

RUTGERS JUNIOR ANIMAL SCIENCE SYMPOSIUM 2024

Sponsored by the New Jersey Department of Agriculture Junior Breeder Program, in cooperation with Rutgers Cooperative Extension faculty and staff.

RUTGERS
New Jersey Agricultural
Experiment Station



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